Remarks

The final Office Action dated March 9, 2009 indicated that the abstract to the specification is objected to because it contains the word "means," and further indicated the following rejections: claims 1-4, 7-18 and 22-26 stand rejected under 35 U.S.C. § 102(b) over Biegelsen *et al.* (U.S. Patent No. 6,089,534); claims 5-6 stand rejected under 35 U.S.C. § 103(a) over the '534 reference in view of Bryant (U.S. Patent No. 6,856,073); and claims 19-21 stand rejected under 35 U.S.C. § 103(a) over the '534 reference in view of Uchikawa (U.S. Patent No. 3,947,644). Applicant traverses all of the rejections and, unless stated by the Applicant, does not acquiesce to any objection, rejection or averment made in the Office Action.

The Office Action's assertions of correspondence are unsupported in the cited references and further rely upon erroneous presumptions regarding the application of cited teachings from completely unrelated fields, which presumptions are neither supported in the cited references nor capable of functioning as suggested in the Office Action. In short, all rejections rely upon an assertion that a diaphragm in a pressurized air flow control valve (in the '534 reference) would somehow operate to generate sound as claimed (*i.e.*, as a speaker), despite the lack of any disclosure of any contemplated use of the cited air valve as a speaker, or any related control mechanism. These rejections, relying upon presumptions as to what a diaphragm valve "could" do if operated as claimed, stops far short of establishing correspondence to the claimed invention under 35 U.S.C. §§ 102 or 103, with respect to individual limitations and further to the claimed invention as a whole. Other than assert that the cited diaphragm valve could (inadvertently) generate some sort of noise, the Office Actions of record have provided no explanation whatsoever as to how the cited valves would operate as claimed. As consistent with M.P.E.P. § 2143.01, "[t]he test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In this instance, the cited air valve diaphragm in the '534 reference does not contemplate the claimed invention and the nature of the problem solved, cannot operate as claimed, and thus does not provide correspondence to the claimed invention as a whole.

To assist the Examiner's understanding of these differences, Applicant refers the Examiner to Figures 3 and 4, copied below for convenience. The air control valve in the '534 reference uses a diaphragm (30) to either block or (passively) permit the flow of air. Specifically, these figures respectively show a diaphragm valve 30 held in a closed state and in an open state, to selectively block or pass pressurized air supplied from a source 50.

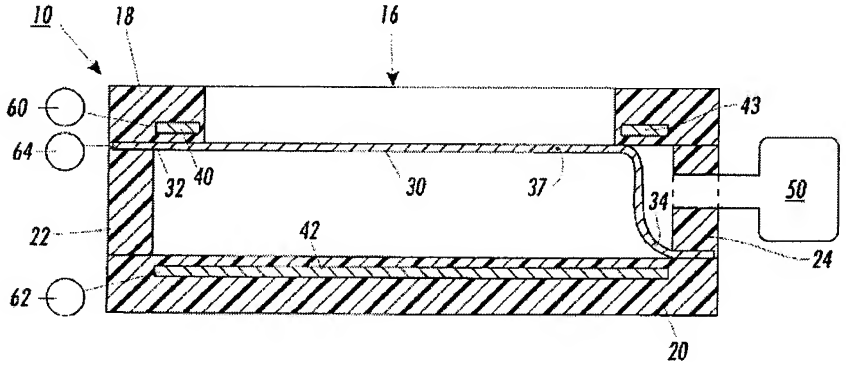

FIG. 3

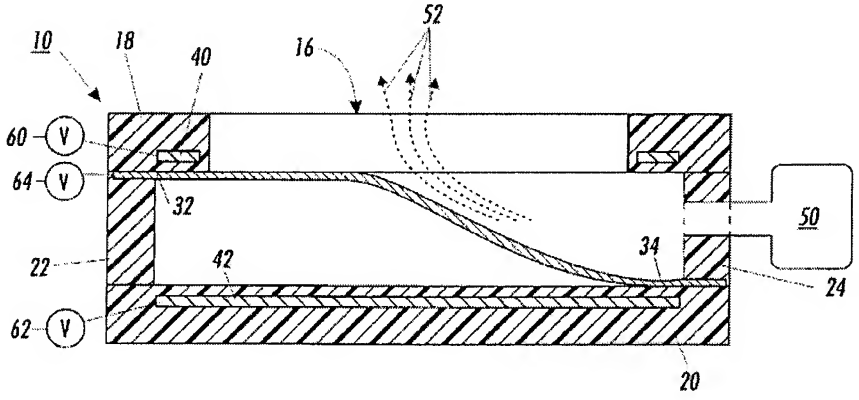

FIG. 4

In contrast to the '534 reference's air valve shown above, the claimed invention is directed to a sound-generating device (*i.e.*, a speaker), having drivers (*e.g.*, electrodes) that are configured to respond to electrical signals (*e.g.*, representing voice or other audio) by manipulating a diaphragm to generate sound waves that represent the electrical signals, such as by operating the diaphragm at a frequency that generates sound waves characterizing an audio signal. As shown in FIG. 3 (copied below for convenience), the claimed invention thus involves dynamically driving a diaphragm to deform in a manner

that generates sound waves in what is otherwise static air, in response to media inputs characterizing audio data. The embodiment shown in FIG. 3 is consistent, for example, with the limitations in claim 19 directed to a diaphragm and driver that generate sound "in response to electrical sound-driver signals applied to the drive means by a controller."

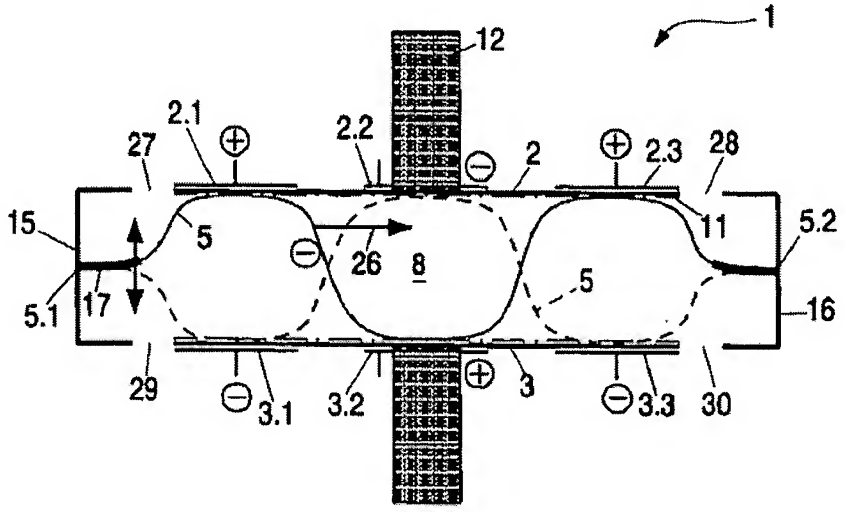

Fig.3

Nothing in the '534 reference or in other references cited in the Office Action suggests or explains how any operation of the '534 reference's air valve would be in response to sound-driver signals, or otherwise in accordance with a speaker-type of device as in the claimed invention. Accordingly, the '534 reference's diaphragm valve does not and cannot operate to generate sound waves in response to an input sound signal as claimed. The rejections and the response to Applicant's arguments presented in the Office Action amount to an unsupported assertion that, simply because the '534 reference's valve device includes a diaphragm that may happen to make noise during operation, it somehow discloses the generation of sound as in the claimed invention. Applicant submits that these assertions are untenable, as the '534 reference does not "generate" any sound in response to inputs for the same, but rather simply passes fluid (*e.g.*, pressurized air) supplied to a chamber by an external source. Nothing in the '534 reference suggests that the diaphragm itself would generate a sound wave, and other than the Examiner's misguided attempt to equate valve noise with purposeful sound generation, the Office Action has failed to provide any reference that would appear to

operate as claimed. Accordingly, no valid rejection remains on the record as it stands (for Appeal).

The Office Action has also implicitly acknowledged that the cited references fail to disclose generating sound as claimed. Instead of showing correspondence to limitations directed to generating audible sound, the Office Action relies upon unsupported assertions of allegedly inherent functions and upon assertions that claim limitations specifically directed to sound generation are somehow only an "intended use." Neither of these assertions is valid. Regarding the allegedly inherent functions, the Office Action has failed to comply with requirements for showing inherency, and in particular, for showing that the missing limitations are necessarily present. That is, to establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter *is necessarily present in the thing described in the reference*, and that it would be so recognized by persons of ordinary skill." *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991) (emphasis added). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *Id.* at 1269 (quoting *In re Oelrich*, 666 F.2d 578, 581 (C.C.P.A. 1981)).

In this instance, the Office Acton has neither cited a reference that supports the alleged inherency, nor has it established that the missing limitations directed to sound generation are necessarily present in the '534 reference. The Office Action's rejection thus amounts to an assertion that one of skill in the art of audio speakers would somehow conclude that an air valve diaphragm could operate as a speaker, simply because it makes some sort of noise during operation, but fails to provide any explanation as to how movement of the diaphragm itself would generate sound (waves), or as to why such generation of sound is necessary in the '534 reference. As consistent with the above discussion, such an assertion is untenable. Moreover, the issue at hand is whether the prior art teaches that the cited diaphragm would operate as claimed, and not whether one of skill in the art could modify the cited diaphragm, in hindsight view of Applicant's disclosure (and contrary to the '534 reference itself), to arrive at the claimed invention. If the § 103(a)-correspondence issue was whether an apparatus could be modified or

reconfigured to perform a different function in hindsight, no patent application would ever pass muster.

The Office Action's assertion that the claimed invention recites "intended use" limitations is also improper because it misconstrues the claim limitations in a manner that is contrary to the plain language in the claims, contrary to common understanding in the art and contrary to relevant law, including the cited *Ex parte Masham* decision. For example, regarding the § 103 rejection of claim 19 over the sole '534 reference, the Office Action acknowledges that the '534 reference fails to disclose operation in response to sound-driver signals, and attempts to overcome this lack of disclosure by alleging that such limitations are "intended use." However, those alleged "intended use" limitations require functionality of the diaphragm and drive means as well as the claim as a whole. That is, the diaphragm and drive means are specifically tailored to respond to sound-driver signals in order to generate sound, which limitations cannot be ignored. These limitations are not "intended use" but rather a specific component that functions to purposefully deform the diaphragm in order to generate a particular sound. As discussed above, the Office Action has provided no teaching or suggestion that the diaphragm valve in the '534 reference could operate in response to sound-driver signals, or would accordingly produce sound. The Office Action has therefore failed to show that the cited structure in the '534 reference "is capable of performing the intended use" as consistent with M.P.E.P. § 2114 and the cited *Ex parte Masham* decision.

Applicant further submits that the '534 reference could not operate as asserted, and it would appear that any modification of the '534 reference to arrive at the claimed invention would undermine the reference's purposes of flow control and alignment. When the prior art teaches away and/or renders the reference being modified unsatisfactory for its intended purpose, the law is clear that there is no motivation to support an obviousness rejection. *See, e.g.,* M.P.E.P. §§ 2143.01 and 2145 (citing *In re Grasselli*, 713 F.2d 731, 743 (Fed. Cir. 1983), § 2143.01 (citing *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984)); and *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (U.S. 2007). In this instance, the respective electrodes as shown in connection with FIG. 5 are not configured to respond to any drive signals for generating sound, and would not appear to operate as such. The Office Action has not provided, and the Applicant cannot ascertain,

any teaching that would suggest that the cited valve from the '534 reference could operate in response to audio-based inputs. Accordingly, modifying the '534 reference in the context of the § 103 rejections, and/or as required to arrive at the allegedly inherent functions in the context of the § 102 rejections, would render the '534 reference inoperable for its purpose. The rejections over the '534 reference are thus improper for these reasons as well.

Specifically regarding the § 103 rejection of claim 19 over the '534 and '644 references, the rejection is improper on two fronts, as the proposed combination of references does not teach or suggest the limitations as claimed, and further because there is no motivation to combine the references as asserted. That is, the combination of the air valve of the '534 reference with electrical sound driver signals in the '644 reference would appear to result in a valve that operates in response to sound driver signals. Nothing in the Office Action or in the references themselves suggests that the diaphragm valve in the '534 reference could operate in response to sound driver signals, much less generate sound in response to such signals. The proposed combination of references is further unmotivated because, as discussed above, modifying the '534 reference to apply sound driver signals instead of the precisely-controlled airflow-based signals would appear to render the '534 reference inoperable for selectively passing pressurized air. Accordingly, the § 103 rejection of claim 19 is further improper for these reasons and should be reversed.

Applicant further submits that the finality of the Office Action is improper, because the prior rejection under § 103 erroneously listed a '073 reference in the body of the rejection, while the statement of rejection cites only to the '534 reference. The instant Office Action corrected the rejection, but it does so as a "final" Office Action, which does not permit the Applicant to assess the nature of the rejection and respond thereto (*e.g.*, with claim amendments). Therefore, the finality of the instant Office Action is improper. Moreover, any subsequent action rejecting claims over the '073 reference should be presented in a non-final form.

In view of the above, Applicant believes that all rejections are improper and should be removed.

Applicant has removed the term "means" from the Abstract, and believes that the objection to the Abstract is no longer applicable. Applicant has also removed exemplary reference numbers from the Abstract, as carried over from a related foreign priority application.

In view of the above, Applicant believes that each of the rejections/objections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063.

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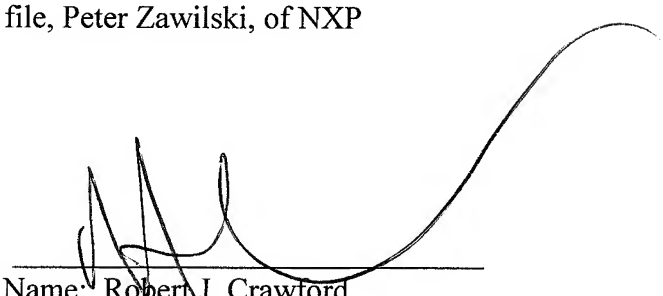
By: 

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